

## **ATTACHMENT J – USER'S MANUAL**



# Reload Terminal User Manual

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3587

# FCC Warning

## Class B Computing Device

### Information to the User

This equipment has been tested and found to comply with the limits for a class B digital device pursuant to part 15 of FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help and for additional suggestions.

The user may find the following booklet prepared by the Federal Communications Commission helpful: "How to Identify and Resolve Radio-TV interference Problems." This booklet is available from the U.S. Government Printing Office, Washington, D.C. 20402, Stock No. 004-000-00345-4.

### FCC Warning

The user is cautioned that changes or modifications not expressly approved by the manufacturer could void the user's authority to operate the equipment.



■ Revision History

Version	Date	Descriptions	Author	Authenticator
1.00	17.July.2000	Creation	Jongbeom Lee	KiYoung Cho
	21.July.2000	transaction 별 최대 저장 건수 추가 Page 12, Memory map	Jongbeom Lee	KiYoung Cho
	27 July.2000	Memory Map 수정, 화면에는 화폐단위 표시하지 않음 프린트 출력에는 화폐단위 표시함. Monthly Pass 총전시 총전월 update.	Jongbeom Lee	KiYoung Cho
1.01	4. August 2000	Translated into English	Youngbae Oh	CS Park



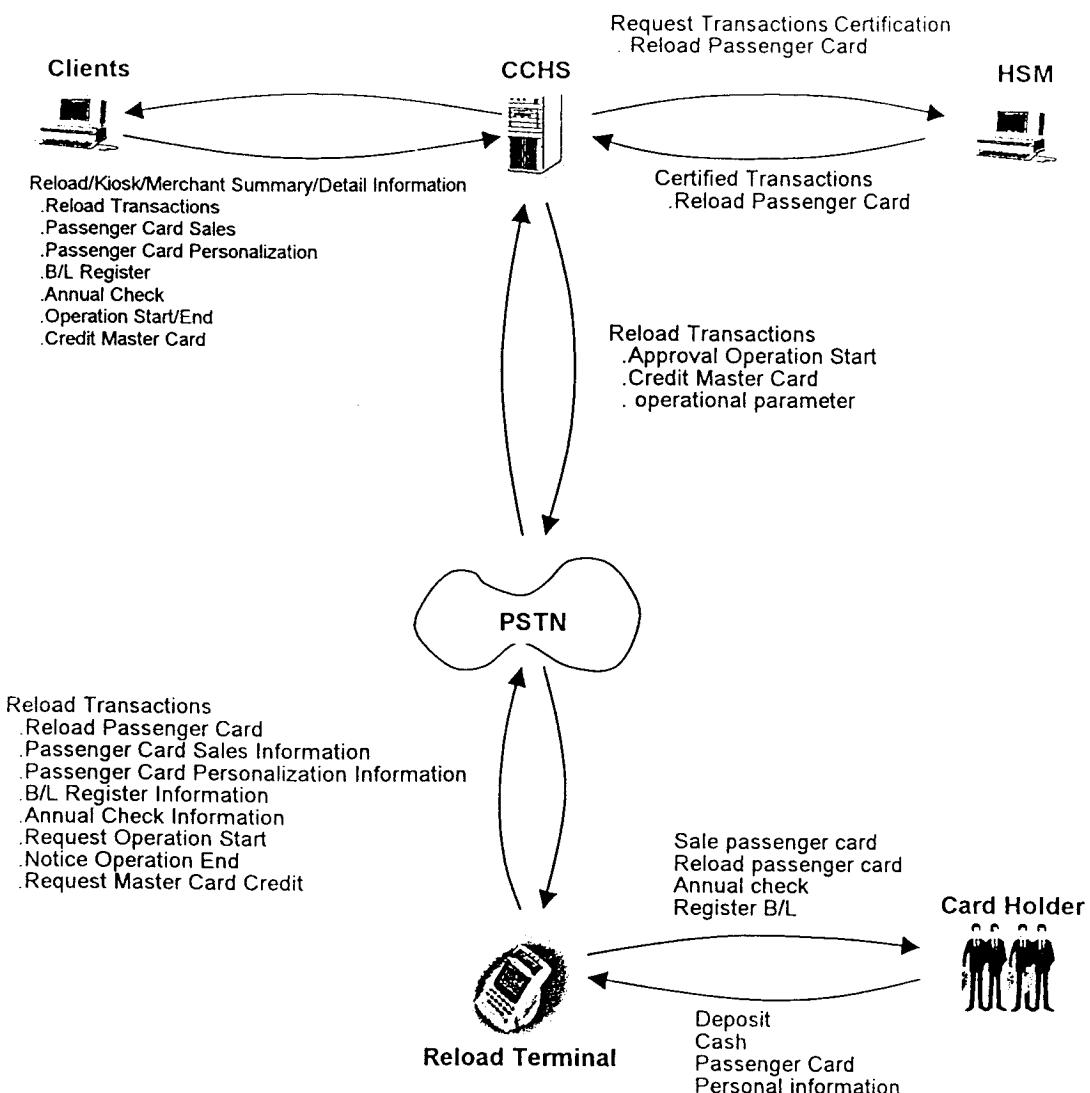
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## I. Reload terminal requirements

### 1. System configuration





## 2. Operational Description

### 2-1. Bus Card's Sales

- Receive Deposit from passenger.
- Monthly pass card can be purchased by submitting Bus Card application form and id card.
- Write Sales and personal information on Bus Card.  
Sales date, Expire date, Holder type, Personal id, Deposit amount, etc.  
Once card writes sales and personal information it can not be purchased any more.  
Only Common card, Monthly pass card can be purchased.  
Free card can not be purchased.
- Issuing Sales receipt.  
Sales and Sales point information, Sales Date, Card Number, Deposit Amount, Receipt Number, National id, Holder type.
- Sales Information should be transferred to HOST.

### 2-2. Bus Card Reloading

- Card should be reloaded by Cash.
- OFF-LINE Reloading, ON-LINE Transferring for reloading information.
- No Black list check.
- No Reloading for Free card.
- All purse should be checked by display.  
Reloading display and passenger display will be used.
- card holder selects purses to be reloaded.(common purse, monthly)
- Reloading amount(Point) and the balance after reloading will be displayed on reloading display and passenger display.
- Monthly pass purse reloads the number of transit and this number will be exchanged with cash.
- Monthly pass purse can reload the amount of three month within validation period with selecting one reloading class out of four classes.
- Monthly pass purse' reloading point can be selected on four reloading amount classes.  
Each class's point is fixed and downloaded from HOST.
- Common purse's reloading request amounts are 10,20,30,ETC.  
In the case of ETC, reloading amount is over 10RMB and by the unit of 10RMB.
- Common purse's maximum balance can not exceed 500RMB.
- After the completion of reloading, reloading receipt is printed out automatically.
- Master card will be used for the purpose of reloading control.
- Reloading information will be transferred to HOST.

### 2-3. Registration of lost card

- Registration condition can be valid for only personal id registered Card(Common, Monthly pass).  
Free card is invalid for processing.
- Input lost date and card number.  
Card Holder should submit reloading or sales receipt.
- Information for lost card should be transferred to HOST.

### 2-4. Daily operation Start/End



#### 2-5. Personal id Registration and Alteration

- Only case of student's Monthly pass card is available for alteration.
- Adult Monthly pass card is not available.
- Alteration is capable at Annual check.
- Card holder should submit receipt.
- Personal id registration information will be transferred to HOST.

#### 2-6. Annual check

- Free card can not be checked.
- Card holder should submit personal id card and receipt.
- Starting date of student card is 1<sup>st</sup> of August and that of adult card is 31th of December.
- Card's starting date for each card holder type is downloaded from HOST.
- When sales Monthly pass card, starting date within current year for each card holder type will be used as valid period.
- Annual check is capable from before three months at the point of starting date.
- Common card has no validity date so do not Annual check.
- Only Monthly pass card can be capable of reloading terminal.
- Free pass card is capable of alteration in Help desk terminal in CCHS.
- Extension of validity date is selectable(6 months, 1year) and can input arbitrary valid period.
- Information of validity period extension is transferred to HOST.

#### 2-7. Card holder type Alteration

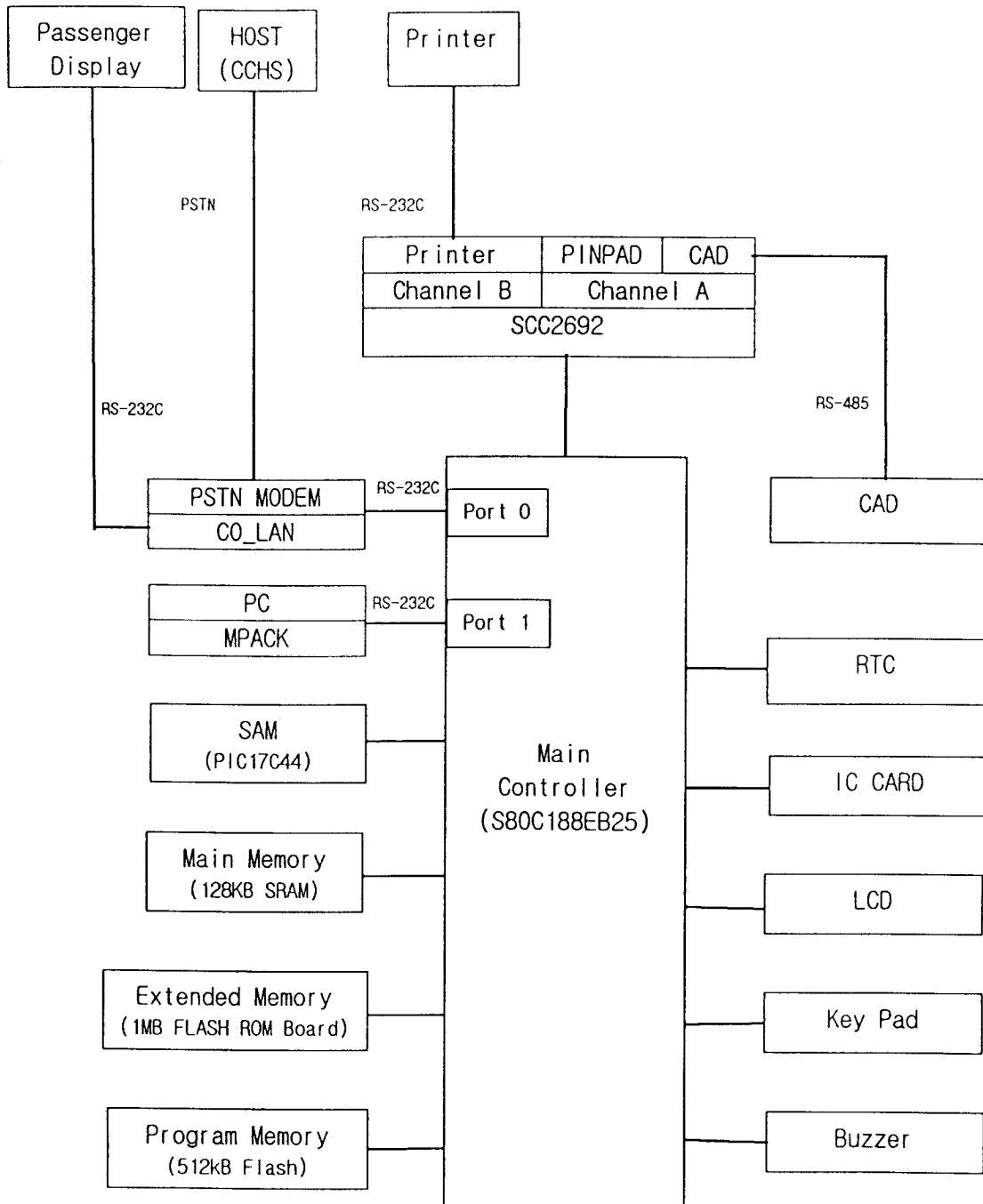
- Free card can not be altered.
- Card holder should submit personal id card and receipt.
- Alteration is available from student to adult.
- Alteration is only valid for Annual check.
- And is valid for out of validity date and in the case of no pre-paid Monthly pass purse.
- holder type alteration information should be transferred to HOST.

#### 2-8. Master card reloading

- Master card is reloaded by maximum reloading amount.  
Reloading amount = Maximum reloading amount - card balance
- The balance of defect card do not transfer.  
After issuing new card and then user reloads amount.



### 3. Hardware configuration





#### 4. The functional description of each device

##### 5-1. Master card

- Restore maximum amount of reloading.
- Gemplus MPCOS-EMV 32K
- Only one Purse is used.
- The maximum amount of Purse is 1,500,000.0 Ryuan. (decimal point is one digit, that is, KAK is one digit)

##### 5-2. RF Passenger card

- MOTOROLA Tier 0 card (Mercury)
- 8.4Kbits
- Contactless ISO 14443-3 Type B compliant
- The maximum amount of Common purse is 500.00Tyuan. (decimal point is two digit. That is, KAK is two digits)

##### 5-3. Main controller

- Main Controller
- S80C188EB25 16 bit CPU
- 16 MHz OSC. Clock

##### 5-4. SAM (Security Access Module)

- Date Cyphering/Decyphering
- PIC 17C44

##### 5-5. Main memory

- Main memory
- SRAM
- 128KB with battery backup
- Location : 0x0000 ~ 0x1FFF
- Data temporary restoring and many kinds of transaction restoring.

##### 5-6. Extended memory

- Sub-memory
- 1MB FLASH ROM  
29EE020(256KB) X 4
- Access type : Bank Selection
- Location : 0x4000 ~ 0x7FFF
- Download data and many kinds of transaction Backup

##### 5-7. Program memory

- Program memory
- 512KB FLASH ROM  
28SF040(512KB) X 1
- Location : 0x80000 ~ 0xBFFFF
- Program and data backup

##### 5-8. CAD (Card Access Device)

- RF card communication device
- 115.2Kbps



5-9. RTC (RealTime Clock)

- Calendar and real time clock
- RTC 72423A
- Current date and time keeping

5-10. LCD (Liquid Crystal Display)

- Liquid Crystal Display
- English 16 characters 4Lines
- ASCII, Chinese character dispalyable

5-11. Keypad

- Data input device
- Total 23 Key,  
Figure 11keys, Function 7 keys, other function 5 keys
- Figure data input and function selection

5-12. PC port

- Communication device
- RS-232C, Max.115.2Kbps
- Controlling by Communication Protocol Software.
- Program download(38400bps, 8data bits, none parity, 1 stop bit)
- Dual usage for a memory pack porting.

5-13. CO\_LAN port

- Communication device
- RS-232C, 9600bps, 8 data bits, none parity, 1 stop bit
- Controlling by communication Protocol Software.
- can be used for connecting port to passenger display.

5-14. Printer port

- Communication device
- RS-232C, 9600bps, 8 data bits, none parity, 1 stop bit
- Controlling by communication Protocol Software.
- can be used for connecting port to printer

5-15. Pin pad port

- Communication device
- RS-232C,
- is used for connecting port to CAD
- Controlling by communication Protocol Software.  
Initial 9600bps, 8 data bits, even parity, 1 stop bit  
Operational 115.2Kbps, 8 data bits, even parity, 1 stop bit

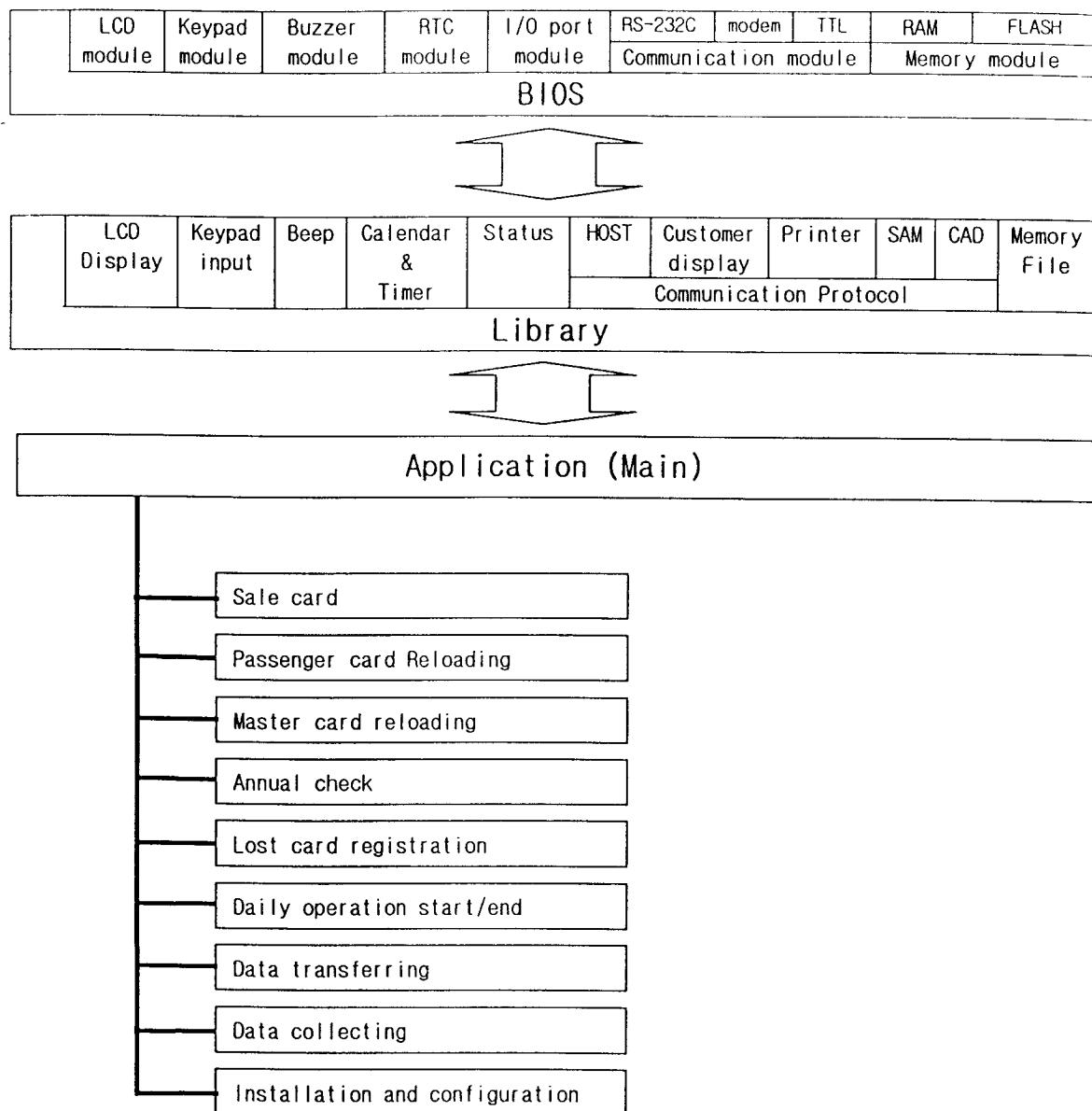
5-16. LINE port

- Communication device
- PSTN modem, 1200bps, 8 data bits, none parity, 1 stop bit
- Controlling by Protocol Software.
- is used as HOST(CCHS) connection Port



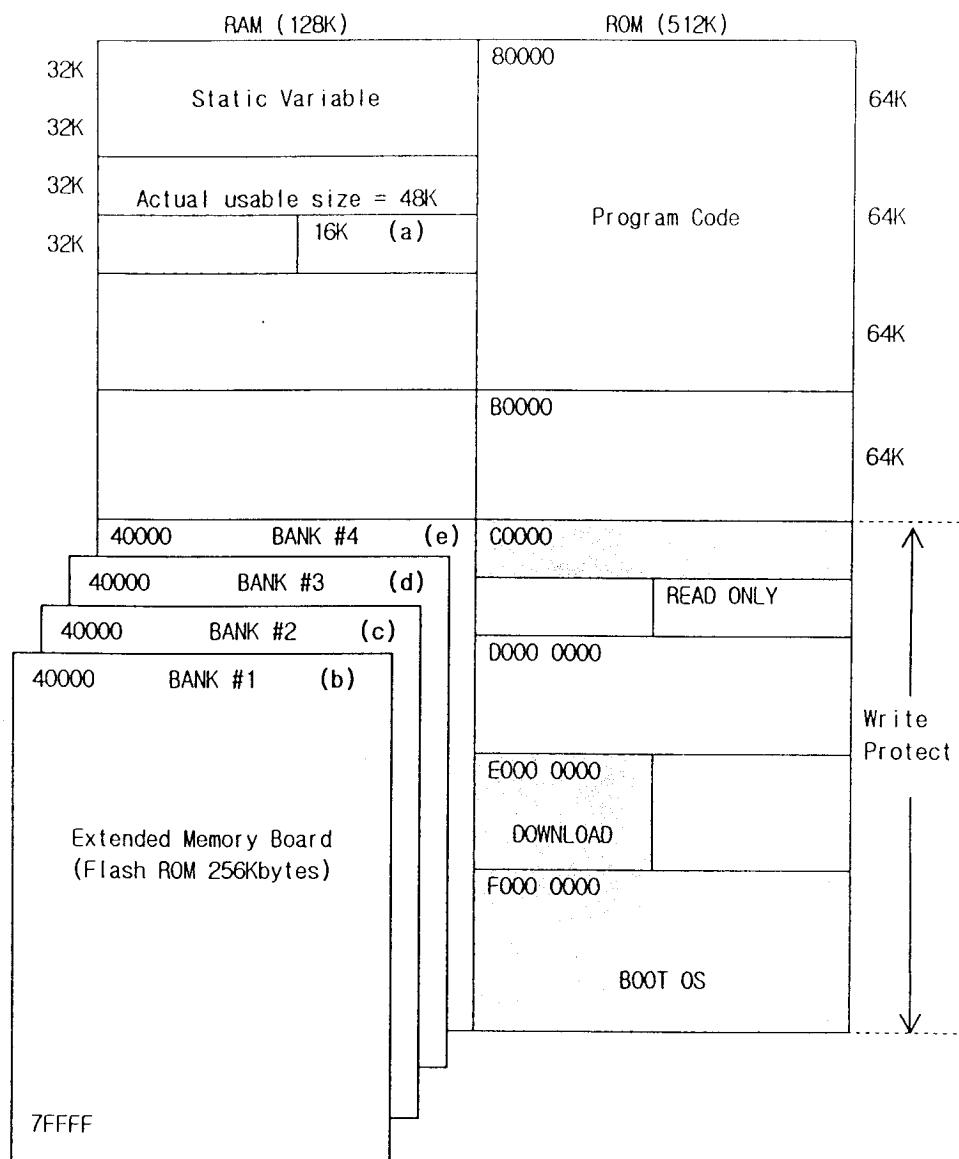
## II. Reload Terminal Software Specification

### 1. Structure





## 2. Memory map



- (a) Flash ROM write interrupt handling routine
- (b) Download data backup, Recharge transaction data backup (max. 350 transaction)
- (c) Card sales, lost card registration, backup (max. 1,000 transaction)
- (d) Annual check, card sales, backup (max. 1,000 transaction)
- (e) Lost card registration, Annual check backup (max 1,000 transaction)



### 3. Process description

#### 3-1 MAIN

Display / Print	Processing
<div style="border: 1px solid black; padding: 5px; text-align: center;"><b>Card Recharger</b> [10001] 2000.7.15 10:30</div>	<ul style="list-style-type: none"><li>- Key define<ul style="list-style-type: none"><li>Insert card : Check balance of Passenger card and reload</li><li>F1 : Operation Start/End</li><li>F2 : Receipt re-printing</li><li>F3 : Lost card registration</li><li>F4 : Update validity date</li><li>F5 : Master card reloading</li><li>F7 : Installation and configuration</li><li>SND : Data transferring</li><li>TOT : Printing out collected data</li><li>ENT : Check the balance of Master card</li></ul></li><li>- Power on check items<ul style="list-style-type: none"><li>. On checking operation starting date, if it is not related date the terminal requests operation starts automatically.</li><li>. If any transaction which has not transferred, terminal transfer transaction automatically.</li><li>. If automatic transferring condition that is set in HOST is satisfied, terminal transfers transaction.</li><li>. If the balance of Master card satisfies automatic reloading condition that is set in HOST terminal requests automatic reloading.</li><li>. When download data of Main memory is defect, they are recovered from Flash ROM.</li><li>. If Autodownload flag is set terminal requests auto download.</li></ul></li><li>- Terminal no, current date, time are displayed at initial display.</li><li>- Call the function of input key.</li><li>- When Passenger card is inserted operator check sales date and if there is no sales date operator call sales function. If sales date exists operator call reloading function.</li></ul>



3-2. Card Sales

Display / Print	Processing
<p><b>Sales card</b></p> <p>Dep: 99999999.99</p> <p>NID: _____ _____</p>	<ul style="list-style-type: none"> <li>- On checking sales date of card, if card has already been sale terminal refuses access.</li> <li>- Display card deposit and do not display currency unit.</li> <li>- Key in National id 20 digits of card holder. The first 10 digits are key-in automatically the last 10 digits are stand-by for key-in.</li> </ul> <p>CLR : End</p>
<p><b>Sales card</b></p> <p>Holder type <b>Adult</b> Student</p>	<ul style="list-style-type: none"> <li>- Selects Holder type. F2 : Adult F3 : Student</li> </ul> <p>CLR : End</p>
<p>2000.12.31 Adult</p> <p>NID: 1234567890 1234567890</p> <p>Press <b>ENT</b> key</p>	<ul style="list-style-type: none"> <li>- Display input data and receive final confirmation. Validity period, holder type, NID Validity period is determined by starting date of card which has set from HOST.</li> </ul> <p>ENT : Confirmation CLR : End</p>
<p><b>Receipt</b></p> <p>Company: Address: Name of Rep.: Company No.: Sales date: Card No.: Sales amount:10.00 元 NID:</p>	<ul style="list-style-type: none"> <li>- Write Sales information and personal information. card data update sequence           <ol style="list-style-type: none"> <li>1. NID ( #2 L24 B00 - B09 )</li> <li>2. Deposit ( #2 L24 B11 - B14 )</li> <li>3. Holder type ( #2 L17 B06H )</li> <li>4. Validity period ( #2 L17 B09 - B10 )</li> <li>5. Sales Flag ( #2 L17 B11H )</li> <li>6. Sales date ( #2 L17 B12 - B14 )</li> </ol> <p>In the case of ending by error, recovery process is not needed.</p> </li> </ul>
<p><b>Sales card</b></p> <p>Completed</p> <p>Take out a card</p>	<ul style="list-style-type: none"> <li>- Restore card sales information on transaction file. Sales date,Card No.,NID,Validity period,Deposit,Holder type, etc</li> <li>- Print out card sales receipt. Display currency unit.</li> <li>- Wait until card is taken out.</li> </ul>



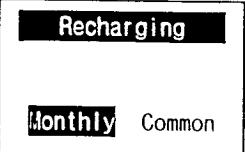
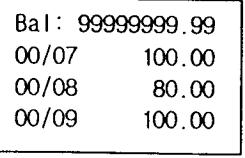
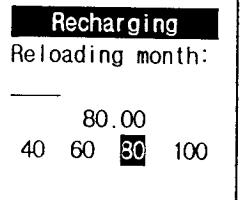
3-3. Passenger card Reloading

Display / Print	Processing
<p><b>Recharging</b> Deny  Take out a card</p>	<ul style="list-style-type: none"> <li>- If card is locked or our of valid error message is displayed and end the process.</li> <li>- Follow reloading procedure according card types.</li> </ul>
<p><b>Recharging</b> Bal: 9999999.99  10 20 30 ETC</p>	<p><b>In the case of Common card</b></p> <ul style="list-style-type: none"> <li>- Display current balance and input requested reloading amount. Currency unit is not displayed. F1 : 10 F2 : 20 F3 : 30 F4 : Input reloading amount. Input amount unit is Yuan, check whether the unit is over 10 Yuan 10 Yuan. CLR : End</li> <li>- Current balance and requested reloading amount is displayed on Passenger display. Two decimal digit is displayed.</li> <li>- Debit reloading amount form Master card. debit amount = requested reloading amount X 10 Master card amount is one digit KAK unit.</li> <li>- If Master card debit is normal terminal restore reloading transaction data on memory.</li> <li>- Write reloading data on Passenger card. Reloading amount = Requested reloading amount X 100 Passenger purse amount is two digits' KAK unit.</li> </ul> <p>card data update sequence</p> <ol style="list-style-type: none"> <li>1. Last debit log ( #1 L1 )</li> <li>2. Last debit log backup ( #1 L2 )</li> <li>3. Purse credit Approval code backup ( #1 L11 B08-B14 )</li> <li>4. Purse credit Approval code ( #2 L26 B08-B14 )</li> <li>5. Last purse credit log ( #2 L18 ) If error occurs error during updating Purse credit Approval Code is recovered to before state and end process.</li> <li>6. Last purse credit log backup ( #2 L19 )</li> <li>7. Credit count ( #2 L29 B05-B08 )</li> <li>8. Purse ( #10 L61 B00-B03 ) If error occurs error during updating credit count is recovered to before state and end process.</li> </ol>
<p><b>Recharging</b> 10.00  Please Wait</p>	



Display / Print	Processing
<p>Error Receipt</p> <p>Company name: Address: Name of Rep.: Company No.: Terminal No.: Reloading date: Card No.: Reloading amount: 10.00 元 Balance of before reloading: 0.00 元 Balance of after reloading: 10.00 元 Approval No.: M/C Balance of after reloading: 100.00 元 TC code: Receipt No.:</p>	<ul style="list-style-type: none"><li>- If passenger card reloading error occurs after Master card debit terminal print out error receipt. Display currency unit.</li></ul>
<p>Receipt</p> <p>Company name: Address: Name of Rep.: Company No.: Terminal No.: Reloading date: Card No.: Reloading amount: 10.00 元 The balance of before- reloading: 0.00 元 The balance of after- reloading: 10.00 元 Approval No.: 총잔액 M/C 잔액: 100.00 元 TC code: Receipt No.:</p>	<ul style="list-style-type: none"><li>- On normal completion for Passenger card reloading, reloading transaction data in memory is updated for normal memory. Reloading date, Card No., purse type, Reloading amount (Two decimal digits), card holder type, TC code, Approval No., The balance of before-reloading/after-reloading for passenger card, The balance of after-reloading for master card, Reloading results, etc.</li></ul>
<p>Recharging</p> <p>Completed Take out a card</p>	<ul style="list-style-type: none"><li>- Display reloading receipt. Display currency unit. Receipt No. is five digits serial number starting on every first month.</li><li>- Wait until card is taken out.</li></ul>



Display	Processing
 	<p><b>In the case of Monthly pass card</b></p> <ul style="list-style-type: none"> <li>- Select purse to be reloaded.             <ul style="list-style-type: none"> <li>F2 : Monthly pass purse</li> <li>F3 : Common purse</li> <li>F4 : Purse balance inquiry</li> <li>ENT : Acknowledge</li> <li>CLR : End</li> </ul> </li> <li>- In the case of Common purse, it is processed by the same procedure to Common card.</li> <li>- Purse balance inquiry displays only valid purse balance. Common purse balance, Monthly pass purse displays transaction date and point. Currency unit is not displayed.</li> <li>- Each purse balance is displayed on passenger display. Common purse balance is display two digit decimal. Monthly pass purse displays three digit decimal including relevant month. For example, card has 100.50 point on October It displays as 10 100. After waiting for temporary time(0.5sec), repeat with the same method to display following purse until completion of inquiry.</li> <li>- On input CLR key operate ends inquiry and back to previous display .</li> <li>- After checking usable season purse area ( #2 L17 B00-B05 ) if it has no area terminal displays message("Full storage") and ends the process.</li> <li>- Input month to reload. (YYMM) Checking whether input month is valid for reloading. Checking card's validity period and valid period set by HOST. Checking whether card already has reloaded. ENT : Input completion CLR : End</li> <li>- Display point class set by HOST and select the point to reload. F1 : The fist point amount F2 : The second point amount F3 : The third point amount F4 : The fourth 내번재 point amount ENT : Acknowledge CLR : End</li> <li>- Display selected point with translation to cash amount. Requested reloading amount= point X Translated amount set by HOST</li> <li>- Display input month and selected point on passenger display. Point displays only integral number.</li> </ul>
	



Display / Print	Processing
<div style="border: 1px solid black; padding: 5px; text-align: center;"> <b>Recharging</b>            Month: 2000/10            Point: 80            Please Wait         </div>	<ul style="list-style-type: none"> <li>- Debit requested reloading amount converted from Master card. debit amount = Requested reloading amount / 10 Master card amount is one digit KAK unit.</li> <li>- If Master card debit is normal terminal restore reloading transaction data on memory.</li> </ul>
<div style="border: 1px solid black; padding: 5px; text-align: center;"> <b>Error Receipt</b>            Company name:            Address:            Name of Rep.:            Company No.:            Terminal No.:            Reloading date:            Card No.:            Reloading month:            Reloading point: 10.00            Before-reloading point:            0.00            After-reloading point:            10.00            Approval No.:            After-reloading M/C            balance:100.00 元            TC code:            Receipt No.:         </div>	<ul style="list-style-type: none"> <li>- Wite reloading data on Passenger card. Reload input month and selected point amount. Select area which is not used or out of date.</li> </ul>
<div style="border: 1px solid black; padding: 5px; text-align: center;"> <b>Receipt</b>            Company name:            Address:            Name of Rep.:            Company No.:            Terminal No.:            Reloading date:            Card No.:            Reloading month:            Reloading point: 10.00            Before reloading point:            0.00            After reloading point: 10.00            Approval No.:            After-reloading M/C            balance:10.00 元            TC code:            Receipt No.:         </div>	<ul style="list-style-type: none"> <li>- card data update sequence           <ol style="list-style-type: none"> <li>1. Last debit log ( #1 L1 )</li> <li>2. Last debit log backup ( #1 L2 )</li> <li>3. Purse credit Approval code backup ( #1 L11/L12/L13 )</li> <li>4. Purse credit Approval code ( #2 L26/L27/L28 )</li> <li>5. Last purse credit log ( #2 L20 )               <ul style="list-style-type: none"> <li>If error occurs during updating terminal recovers Purse credit Approval code to previous state and ends.</li> </ul> </li> <li>6. Last purse credit log backup ( #2 L21 )</li> <li>7. Credit count ( #2 L29 B00-B03 )</li> <li>8. Credit month ( #2 L17 )</li> <li>9. Purse ( #10 L60 )               <ul style="list-style-type: none"> <li>If error occurs during updating terminal recovers Purse credit count to previous state and ends.</li> </ul> </li> </ol> </li> <li>- If after Master card debit 亨 passenger card reloading error occurs terminal print out error receipt.</li> <li>- In Passenger card reloading is normally completed terminal updates reloading transaction data in memory as normal reloading. Reloading date, Card No, purse type, Reloading point(two decimal place), card holder type, TC code, Approval No, passenger card's point before/after reloading, master card's balance after reloading, Reloading result, Reloading month, point type, Converted amount, etc.</li> <li>- Print out reloading receipt. Display currency unit. Receipt No. is five digit serial number starting from number one every day.</li> <li>- Wait until card is taken out.</li> </ul>



### 3-4. Master card Reloading

Display / Print	Processing
<p><b>M/C Recharge</b></p> <p>Not reloadable Press <b>ENT</b> key</p>	<ul style="list-style-type: none"><li>- If Master card does not exist or is not registered at terminal installation or is defected terminal ends process.</li></ul>
<p><b>M/C Recharge</b></p> <p>Dialing Please Wait</p>	<ul style="list-style-type: none"><li>- Contact to HOST.</li><li>- After connection to HOST, processing procedure : Refer to "Communication Protocol for CREDIT DISTRIBUTION between CDS and RELOAD TERMINAL"</li></ul>
<p><b>M/C Recharge</b></p> <p>Processing Please Wait</p>	
<p><b>M/C Recharge</b></p> <p>Completed Press <b>ENT</b> key</p>	

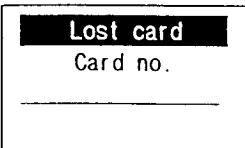
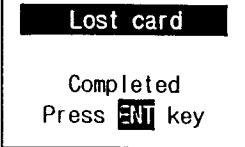


3-5. Annual check

Display	Processing
<div style="border: 1px solid black; padding: 5px; text-align: center;"> <b>Annual check</b>             Insert a card         </div>	<ul style="list-style-type: none"> <li>- Wait until card is inserted.</li> </ul>
<div style="border: 1px solid black; padding: 5px; text-align: center;"> <b>Annual check</b>             Not updatable            Take out a card         </div>	<ul style="list-style-type: none"> <li>- If current date is not set in the period to be determined from HOST terminal display Error Message and sounds warning (Beep three times) and then completes processing.</li> <li>- If it is not Monthly pass card terminal delivers Error message and warning sound(beep three times) and then completes processing.</li> </ul>
<div style="border: 1px solid black; padding: 5px; text-align: center;">           NID: 1234567890            1234567890            00.12.31 Adult            6M <b>12M</b> ETC         </div>	<ul style="list-style-type: none"> <li>- Displays NID, Current validity period, card holder type.</li> <li>- Input or select extension period.           <ul style="list-style-type: none"> <li>F1 : Extend six months</li> <li>F2 : Extend twelve months</li> <li>F3 : ETC, Input validity period.(YYYYMM)</li> <li>CLR : End</li> </ul> </li> </ul>
<div style="border: 1px solid black; padding: 5px; text-align: center;"> <b>Annual check</b>             Change NID            1234567890            1234567890         </div>	<ul style="list-style-type: none"> <li>- If Card holder type is student terminal displays current NID and new NID is received.           <ul style="list-style-type: none"> <li>DEL : Delete one character input latest.</li> <li>CLR : End</li> </ul> </li> <li>- When inputting "ENT" key without new NID input if "ENT" key is input terminal does not change NID.</li> </ul>
<div style="border: 1px solid black; padding: 5px; text-align: center;"> <b>Annual check</b>             Change type            Student-&gt;Adult            YES <b>NO</b> </div>	<ul style="list-style-type: none"> <li>- If Card holder type is student terminal display holder type change display.           <ul style="list-style-type: none"> <li>F2 : YES</li> <li>F3 : NO (default)</li> <li>CLR : End</li> </ul> </li> <li>- After selecting input "ENT" key.</li> </ul>
<div style="border: 1px solid black; padding: 5px; text-align: center;">           NID: 1234567890            1234567890            01.12.31 Adult            Press <b>ENT</b> key         </div>	<ul style="list-style-type: none"> <li>- Display data to be changed and input final confirmation.           <ul style="list-style-type: none"> <li>NID, Validity period, card holder type</li> <li>ENT : Acknowledge</li> <li>CLR : End</li> </ul> </li> </ul>
<div style="border: 1px solid black; padding: 5px; text-align: center;"> <b>Annual check</b>             Completed            Take out a card         </div>	<ul style="list-style-type: none"> <li>- Write Annual check data on card.           <ul style="list-style-type: none"> <li>Adult : Validity period,</li> <li>Student : Validity period, NID, card holder type</li> </ul> </li> <li>- Restore Annual check transaction data on memory.           <ul style="list-style-type: none"> <li>annual check date/time, Card No., Validity period, NID, card holder type, etc.</li> </ul> </li> </ul>



### 3-6. Lost Card Registration

Display / Print	Processing
	<ul style="list-style-type: none"><li>- Input card no.. If it is not Passenger card terminal displays error message and ends processing.</li></ul>
	<ul style="list-style-type: none"><li>- Input NID(National id).</li></ul>
	<ul style="list-style-type: none"><li>- Restore lost card registration transaction data. Registration date/time, Passenger card no, NID, etc.</li></ul>



3-7. Job open/close

Display / Print	Processing
	<ul style="list-style-type: none"><li>- Select Job open/close.</li><li>F2 : Job open</li><li>F3 : Job Close</li><li>CLR : End</li></ul>
	<p>Request Job open</p> <ul style="list-style-type: none"><li>- Input operator id and read Master card.</li><li>Master card No., Master card balance</li><li>- Restore operator id as operator.</li><li>- Transfer job open request Message to HOST.</li><li>- If terminal receives normal acknowledge form HOST it restore Job Open date.</li><li>- If Auto-download flag is set terminal requests download automatically.</li></ul>
	<p>Request Job Close</p> <ul style="list-style-type: none"><li>- If there are not transferred data once terminal transfer all transaction data to HOS and requests Job Close.</li><li>- Read Master card.</li><li>Master card No., Master card balance</li><li>- Transfer Job Close Request Message to HOST.</li><li>- If terminal receives normal acknowledge message from HOST it clears Job Open date and deletes all transaction data</li><li>- If Autodownload flag is set terminal request download automatically.</li></ul>



### 3-8. Transaction data Transferring

Display / Print	Processing
<p><b>Transmit data</b></p> <p>Please Wait</p>	<ul style="list-style-type: none"><li>- If there are no Transaction data to transfer terminal closes processing. Reloading data, Card Sales Data, Annual check data, Lost card Registration data, etc.</li></ul>
<p><b>Transmit data</b></p> <p>Dialing Please Wait</p>	<ul style="list-style-type: none"><li>- Contact to HOST.</li></ul>
<p><b>Transmit data</b></p> <p>Recharge data 1/50 Please Wait</p>	<ul style="list-style-type: none"><li>- Transfer Transaction data.<ol style="list-style-type: none"><li>1. Passenger card reloading data</li><li>2. Card sales data</li><li>3. Annual check data</li><li>4. Lost card registration data</li></ol></li></ul>
<p><b>Transmit data</b></p> <p>Completed Press ENT key</p>	<ul style="list-style-type: none"><li>- If RAM data is defected terminal transfer after recovering data from Flash ROM.</li><li>- When transferring after recovering download data in RAM terminal transfers only Flash ROM's data. At this time reloading transaction data set all re-transferred flag.</li><li>- Display data class to transfer, Total transaction data, Number of transferred data.</li><li>- If transferring is completed terminal prints out transferred data tabulation. Terminal No., Loader No., Transferring date, Total sales amount (Total = Common + Monthly + Sales), Summation amount and number of reloading for each purse, Summation amount of card deposit, Number of Annual check, Print out number of lost card registration. Display currency unit.</li></ul>
<p><b>Report</b></p> <p>Reloader No.:</p> <p>Transferring date/time:</p> <p>Total: yian</p> <p>Common: no.</p> <p>Monthly: yian</p> <p>Sales: no.</p> <p>Annual: yian</p> <p>Lost: no.</p>	

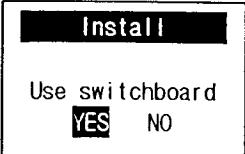
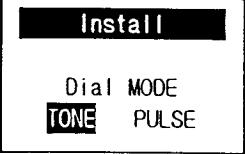
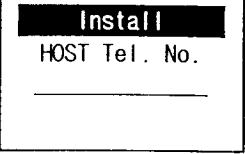


3-9. Report printing

Display / Print	Processing
<p><b>Sales Total</b></p> <p>No transaction</p>	<ul style="list-style-type: none"><li>- If there are no Transaction data to totalize terminal ends processing. Reloading data, Card sales data, Annual check data, Lost card registration data, etc.</li></ul>
<p>Select output</p> <p><b>F1 Simple print</b> <b>F2 Detail print</b> <b>F3 LCD display</b></p>	<ul style="list-style-type: none"><li>- Select print method for collected data. F1 : Print out total tabulation. F2 : Print out detail tabulation. F3 : Display total tabulation. CLR : End</li></ul>
<p>Simple Report</p> <p>Reloader No.:</p> <p>Collecting data/time:</p> <p>Total: yian</p> <p>Common: no.</p> <p>Monthly: yian</p> <p>Monthly: no.</p> <p>point</p> <p>Sales: yian</p> <p>Sales: no.</p> <p>Annual: yian</p> <p>Annual: no.</p>	<ul style="list-style-type: none"><li>- Total tabulation Print out total tabulation for all Transaction. Reloader No., Collecting data/time, Total sales amount (Total = Common + Monthly + Sales), Number of reloading transaction for each purse and Total amount. Total amount of card deposit, Number of Annual check, Printer out number of lost card registration. Display currency unit.</li><li>- Detail tabulation Print out detail data for each transaction. Reloader No., Collecting data/time, Reloading : reloading date/time, card no., reloading purse, reloading amount(point), process result Sales : Sales date/time, Card no., NID, card holder type, Validity period Annual check : check date/time, Card no., NID, card holder type, Validity period. Lost card registration : Registration date/time, Card no., NID Display currency unit.</li></ul>



3-10. Installation and set up

Display / Print	Processing
	<ul style="list-style-type: none"><li>- Select following jobs. F1 : Reloader installation F2 : Set up environment CLR : End</li></ul>
	<b>Install</b>
	<ul style="list-style-type: none"><li>- Submit password for installation function. "3587"</li></ul>
	<ul style="list-style-type: none"><li>- Select communication line. F2 : PSTN F3 : RS-232C CLR : End</li></ul>
	<ul style="list-style-type: none"><li>- Select switchboard usage for PSTN. F2 : YES (Use switch board) F3 : NO (Do not use switchboard) CLR : End</li></ul>
	<ul style="list-style-type: none"><li>- Select dial mode for PSTN. F2 : TONE(electronic mode) F3 : PULSE(mechanic mode) CLR : End</li></ul>
	<ul style="list-style-type: none"><li>- Dial telephone number for HOS connection in PSTN. In the case of out of local area, operator input local area code. Maximum 16 digit can be input.</li></ul>

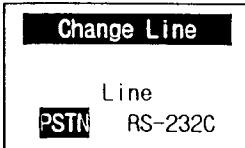
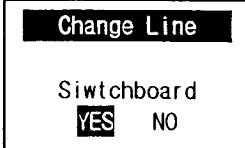
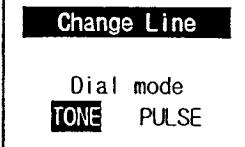
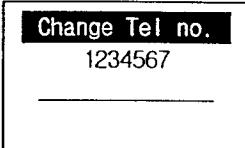
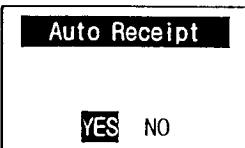


Display / Print	Processing
<p>Install Reload no. _____</p>	<ul style="list-style-type: none"><li>- Submit reloader no.</li><li>  Reload no. is five digits.</li></ul>
<p>Install Master card no. 1234567890123456 Press ENT key</p>	<ul style="list-style-type: none"><li>- Check Master card's validity</li><li>  Display Master card no.</li></ul>
<p>Install Dialing Please Wait</p>	<ul style="list-style-type: none"><li>- Connect to HOST.</li></ul>
<p>Install [ 60 % ]       Please Wait</p>	<ul style="list-style-type: none"><li>- Display processing status for Parameter download.</li></ul>
<p>Install Completed Press ENT Key</p>	<ul style="list-style-type: none"><li>- Download data is restored on Flash Rom for back up by adding CRC on message from HOST.</li><li>  When Main memory's download data is defected terminal do not connect to HOST but re-install.</li><li>- Print out setting configuration when Download is completed.</li><li>  Reload no.,   Company name, Address, Name of representative, Company No.,   Reloading Kiosk No., Tel no., etc.   Installation date/time, Card deposit amount,   Purse maximum balance,   HOST Telephone number,   Reloading commission,   Transferring condition,   M/C reloading condition,   Starting point for adult, Starting point for student,   Monthly pass pre-reloading due,   Annual check period,   Number of issuer, Issuer ID,   Monthly pass reloading point class, Return amount for point.</li></ul>

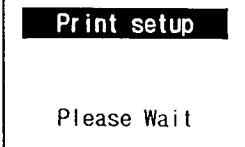
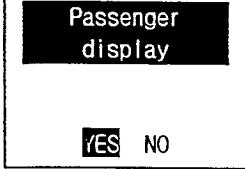
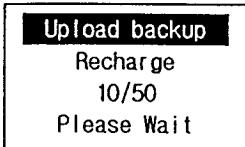


Display / Print	Processing
	<ul style="list-style-type: none"><li>- Select following jobs.<ul style="list-style-type: none"><li>F1 : Reloader installation</li><li>F2 : Set up environment</li><li>CLR : End</li></ul></li></ul>
	<ul style="list-style-type: none"><li>- Submit password.<ul style="list-style-type: none"><li>"1472"</li></ul></li></ul>
	<ul style="list-style-type: none"><li>- Submit function code.<ul style="list-style-type: none"><li>50 : Date change</li><li>51 : Time change</li><li>52 : Change Line</li><li>53 : Change HOST telephone number</li><li>54 : Set up receipt automatic print-out</li><li>55 : Set up configuration print</li><li>56 : Set up display for passenger</li><li>57 : Backup transaction transferring</li></ul></li></ul>
	<ul style="list-style-type: none"><li>- Display current date with year, month, day order.</li><li>- Input new date to change.</li><li>- CLR : End</li></ul>
	<ul style="list-style-type: none"><li>- Display only time and minute.</li><li>- Input time and minute to change.</li><li>- CLR : End</li></ul>



Display / Print	Processing
	<b>Change Line</b> <ul style="list-style-type: none"><li>- Select line to use. F2 : PSTN F3 : RS-232C CLR : End</li></ul>
	<ul style="list-style-type: none"><li>- Select switchboard usage in PSTN. F2 : YES (Use switchboard) F3 : NO (Do not use switchboard) CLR : End</li></ul>
	<ul style="list-style-type: none"><li>- Select dial mode in PSTN 이면. F2 : TONE (Electronic mode) F3 : PULSE (Mechanic mode) CLR : End</li></ul>
	<b>Change HOST tel no.</b> <ul style="list-style-type: none"><li>- Display current tel. No. for HOST connection. Input new tel. No. for HOST connection to change. Max 16 digits available</li></ul>
	<b>Auto receipt print out</b> <ul style="list-style-type: none"><li>- Select auto receipt printing. F2 : YES (Print out receipt automatically) F3 : NO (Do not print out receipt automatically) CLR : End</li></ul>



Display / Print	Processing
	<p><b>Print set up configurator</b></p> <ul style="list-style-type: none"><li>- Print out set up configuration.</li></ul>
	<p><b>Passenger display using</b></p> <ul style="list-style-type: none"><li>- Select passenger display using. F2 : YES (Use passenger display) F3 : NO (Do not use passenger display) CLR : End</li></ul>
	<p><b>Backup transaction transferring</b></p> <ul style="list-style-type: none"><li>- Transfer backup transaction on Flash ROM to HOST. Reloading transaction should set re-transferring flag. Display Transaction class, total amount of transaction, total amount of transferring.</li></ul>